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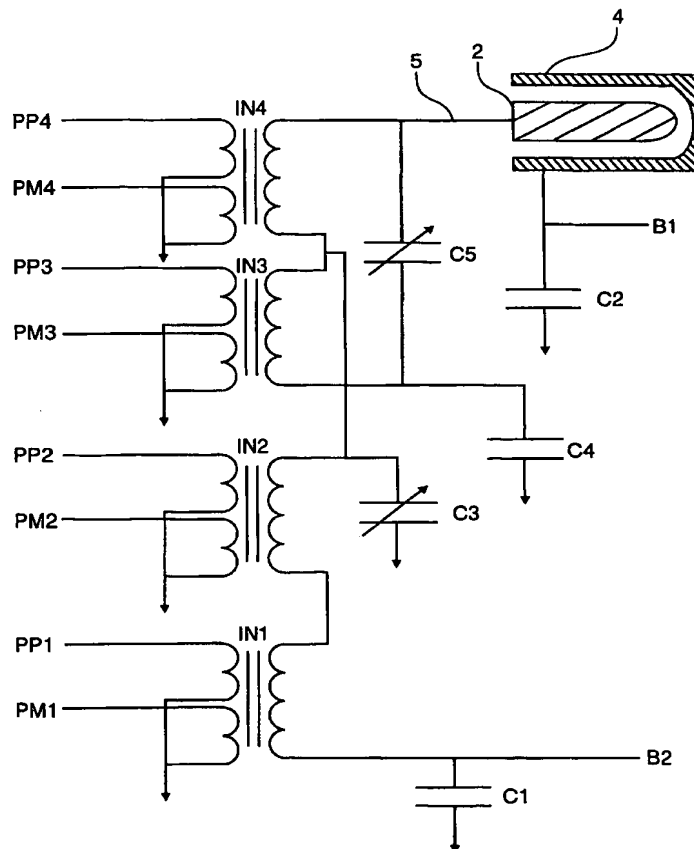
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(54) Title: WAVEFORM GENERATOR ELECTRONICS BASED ON TUNED LC CIRCUITS



(57) Abstract: Disclosed is an apparatus for generating a periodically varying electrical signal for creating a periodically varying electrical field between electrodes of an ion mobility spectrometer. The apparatus includes an output port. A first tuned circuit is provided for being electrically coupled to an external power source and for, in isolation, providing a first periodically varying electrical signal having a first frequency. The first tuned circuit is coupled to the output port for providing an output electrical signal having a component at the first frequency thereto. A second tuned circuit is provided for being electrically coupled to an external power source and for providing a second periodically varying electrical signal having a second frequency different from the first frequency. The second tuned circuit is coupled to the first tuned circuit for varying the output electrical signal about the first periodically varying electrical signal.

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